V. INDUSTRY AND COMMERCE.

World's Demand for Timber and Supply.[1]—The imports of timber by the principal nations were as follows: During the last five years the average importation by Great Britain was 84,720,000 cubic feet of timber—99 per cent of its total consumption. Germany, in 1898, imported, net, 317,700,000 cubic feet, or 24 per cent of its total consumption; France, during the last five years, has imported, net, 105,900,000 cubic feet, or 33 per cent of the total consumption; Belgium, 63,540,000 cubic feet, or 47 per cent of its total consumption; Switzerland, 49,420,000 cubic feet, or 35 per cent of its total consumption. A population of 215,000,000 in middle, western and southern Europe imports from 12.3 to 14.1 billion cubic feet of timber, produced on 25 to 50 million acres of forest land. The exporting countries contribute to this supply as follows: Austria-Hungary, 249,040,000 cubic feet; Norway, 120,020,000 cubic feet; Sweden, 352,300,000 cubic feet; Russia, 416,540,000 cubic feet; United States, 116,490,000 cubic feet; Canada, 162,380,000 cubic feet. The price of timber is rapidly rising, and the supply fails to increase owing to widespread deforestration in new countries. Within fifty years there is likely to be a timber famine. There is little possibility of supplying the demand from tropical countries for two reasons: (1) the unsuitability of the tropical woods to serve as substitutes for conifers and hard woods; (2) the rapidity of decay. A thoroughgoing and widespread reforestration is the only remedy.

Competition with the United States Steel Corporation.—The formation of the United States Steel Corporation has caused some question as to the extent to which the new company would be able to monopolize the iron and steel trade. The following list of large independent companies in the territory covered by the United States Steel Corporation is instructive. The list is taken from the *Iron Age*, of February 14, 1901. It indicates the general nature of the independent enterprises, and shows also the extent to which each controls the production of its raw materials:

PLANTS IN CENTRAL WEST.

1. Jones & Laughlin, limited, Pittsburg. Practically self-contained. Produce steel billets, bars, structural material, light rails and specialties.

[1] Condensation of paper read before International Congress of Sylviculture at the Paris Exposition, on deficiency of wood production in the world. Rafhael Zon, in "The Forester," March 15, 1901.

2. Republic Iron and Steel Company. Consolidation of bar mills; largely self-contained; owning some or producing some pig iron and making steel billets.

3. Otis Steel Company, Cleveland, Ohio. Steel plates; make their own steel.

4. Cambria Steel Company, Johnstown, Pa. Largely self-contained. Makers of steel rails, structural materials, bars and specialties.

5. Carbon Steel Company, Pittsburg. Makers of open-hearth steel and steel plates.

6. Wheeling Iron and Steel Company. Producers of pig iron and steel and different lines of finished products.

7. Oliver Iron and Steel Company, Cleveland. Bars and specialties.

8. Ashland Steel Company, Ashland, Ky. Have no ore; produce pig iron, steel, wire rods and wire products.

9. Sharon Steel Company, Sharon, Pa. Largely self-contained. New plant. Will produce pig iron, open-hearth steel, tin plate, sheets and hoops.

10. Crane Company, Chicago. Large manufacturers of pipe.

11. National Enameling and Stamping Company, Granite City, Illinois. Open-hearth plant; manufacture their own steel.

PLANTS IN EAST.

1. Lackawanna Iron and Steel Company, Scranton, Pa. Largely self-contained; manufacturers of steel rails and billets; are building a large steel and rail plant at Buffalo, N. Y., which will have a surplus of steel, and may be the nucleus of a series of independent enterprises.

2. Pennsylvania Steel Company, Steelton, Pa. Maryland Steel Company, Sparrow's Point, Md. Control ore mines in Cuba. No coke as yet. Produce necessary pig iron and steel; make rails, structural material and track material, furnish raw material to Central Iron and Steel Company, Harrisburg, Pa. Large producers of steel plates.

3. Bethlehem Steel Company, South Bethlehem, Pa. Steel makers, sellers of special billets, makers of armor, guns and high class-forgings.

4. Lukens Iron and Steel Company, Coatesville, Pa. Large producers of open-hearth steel and of steel plates.

5. Phœnix Iron Company, Phœnixville, Pa. Produce open-hearth steel, roll beams and shapes, and build bridges and buildings.

6. Reading Iron Company, Reading, Pa. Do not yet produce steel, large manufacturers of pipe.

7. Passaic Rolling Mill Company, Paterson, N. J. Manufacturers of steel for own purposes. Roll shapes and build bridges and buildings.

8. Tidewater Steel Company, Chester, Pa. Produce pig iron and steel.

9. Diamond State Steel Company, Wilmington, Del. Manufacturers of open-hearth steel, sellers of billets, manufacturers of bars, track material and plates.

10. American Iron and Steel Manufacturing Company, Lebanon, Pa. Produce no steel. Puddle iron, roll bars, make track material, bolts, nuts and rivets.

The *Iron Age* states that one-half the iron ore tonnage of the Lake Superior ranges is in the hands of the United States Steel Corporation, and that its present capacity for pig-iron production is about 6,200,000 tons, the total output of the United States. The new company, it should be added, controls between forty and fifty thousand acres of coal in the Connellsville region, which gives it a practical monopoly of this fuel. Improved processes, however, are rapidly increasing the output of coke from inferior coal, and this will tend to break down the monopoly which the Connellsville region has for so long enjoyed.

Recent Events in the Railway World.[1]—Under the stimulus of the numerous extensive consolidations noted in these pages in March, the development of community of ownership in railway management has gone on apace during the few months just past, approaching steadily that control of all the large lines in a few hands which has been pointed out as the logical outcome of prevailing tendencies. Complaint has already been made by the heavy western shippers of freight that as one of the results of the division of railroad transportation into groups, each controlled by one banking house, it is now useless tc make the rounds of the various railroad offices seeking concessions on shipments. Some railroad authorities think the increased revenue by reason of the abolition of rate-cutting, and because of a few small advances in tariffs, will amount to $50,000,000 a year.

Foreshadowed in statements made shortly after Collis P. Huntingdon died, that his death would lead to rearrangements of the Pacific Coast railroad system of the most far-reaching kind, came the announcement in the first days of February that the Southern Pacific, with its 7,545 miles of road, had been bought by the Union Pacific. This may well be called the biggest thing of its kind in the railroad history of

[1] Contributed by Ferdinand H. Graser.

the country. In the combined system there are 15,000 miles of railroad, two Pacific Ocean lines, and one Atlantic Coast line, running from New York and New Orleans to Galveston. The original transcontinental road, from Omaha to Ogden and thence to San Francisco, becomes after thirty-two years from construction one single line, instead of the original two, Union Pacific and Central Pacific. The "community of ownership" between Union and Southern Pacific will do its work in the line of securing stability of rates, avoiding duplication of service, and opening the way to such economies in operation as experience may show to be feasible. The Harriman syndicate—the same controlling the Union and Southern Pacific—has also come into possession of the Missouri, Kansas & Texas Railway.

As a natural effect of this combination, arrangements are under consideration for a union in management of all the roads in the southwest controlled by George J. Gould. Such a union would embrace the Missouri Pacific, St. Louis & Iron Mountain, St. Louis Southwestern, Texas & Pacific, International & Great Northern, Wabash, Missouri, Texas & Pacific, Denver & Rio Grande, Rio Grande Western and Rio Grande Southern, Colorado Southern and Colorado Midland. If this is effected the whole will be placed under the direction of the Missouri Pacific. It has even been said that the Illinois Central, Chicago & Alton, Chicago & Southern Illinois, St. Louis & San Francisco, as well as the Kansas City Southern, will enter the great combination. The sum of $300,000,000 would not be too high a capitalization for such an enterprise, stretching from the Gulf to the Northwest.

Those interested in the St. Louis & San Francisco have already purchased control of the Kansas City & Fort Scott, and the Kansas City, Memphis & Birmingham system, completing a line 3,002 miles long, of which the Memphis contributes 1,250 miles. The Memphis extends from Kansas City to Birmingham, Ala., with branch lines in Kansas and Missouri. The 'Frisco has lines from St. Louis and Kansas City and Ellsworth (Kans.) into Arkansas, Oklahoma, Indian Territory and Texas.

On January 30 the Southern Railway Company secured control of the Mobile & Ohio Railroad Company, thus gaining a short line from St. Louis and Cairo to the Gulf. The valuable terminals of the Mobile and Ohio, at Mobile, used in connection with those of the Southern, will enable the latter to develop traffic through that port to an extent which would not be practicable to either of the two lines operated separately; and the previous acquisition by the Southern of large and valuable terminals at East St. Louis will enable the Mobile & Ohio to develop business at and from the St. Louis gateway to an extent and in a

manner that would have been impossible with the terminals heretofore available. The Southern Railway now controls over 8,760 miles of lines, making it fifth in respect of mileage of the great railways of the world. It is now surpassed in this respect only by the New York Central, Pennsylvania, Canadian Pacific, and Southern Pacific.

Another ocean to ocean scheme is reported to be taking form. It involves two Chicago lines—the Grand Trunk and the Wisconsin Central—and provides for the Grand Trunk's assumption and control of the Wisconsin Central. This is the route in mind: Portland, Me., to Chicago, Grand Trunk; Chicago to Ashland, Wis., Wisconsin Central; Ashland to Duluth, Northern Pacific, or a new line; Duluth to Winnepeg, line to be projected.

The syndicate which controls the Toledo, St. Louis & Western Railway (the "Clover Leaf" road) and the Ohio Southern Railroad Company, is said to have secured an option on the Lima Northern, in order to provide a short line from Detroit to St. Louis by which the Canadian Pacific could reach St. Louis and be provided with admirable connections for the far West and Pacific Coast points, and by which Detroit could get its first direct connection with the bituminous fields of Ohio.

While official denial has been given to a report that the Chesapeake & Ohio will become an integral part of the Pennsylvania system by a lease of 999 years, the rumor has gained many believers on the exchanges. It is said further that within two years the Pennsylvania will be operating a new trunk line to the South, and running solid trains from Buffalo to Florida. It is stated that the idea is to establish a route to the South via Pittsburg, which will be 300 miles shorter than any other. The arrangement is understood to contemplate the running of through trains from Buffalo and Cleveland to Richmond and Norfolk, thus saving 340 miles from the long routes via Washington and Cincinnati.

Working to the establishment of a direct trunk line through Pittsburg as the main line to Chicago, the Baltimore & Ohio will build a cut-off from Smith's Ferry, Pa., to Canton, Ohio, sixty miles. This line will reduce the distance to Chicago twenty-eight miles, will avoid the heavy grades, and will triple the hauling capacity of trains.

Failing in their efforts to gain the Chicago, Milwaukee & St. Paul, the syndicate controlling the Northern Pacific and Great Northern has arranged a consolidation of the Chicago, Burlington & Quincy to its other interests.

Foreign Loans in the American Money Market.—The following table presents the foreign securities held by the New York Life Insurance Company at the beginning of the past year:

NAME OF SECURITY.	PAR VALUE.
Austria, 4 per cent	$2,459,142 00
Brazilian gold, 1867	50,000 00
Bulgarian Fr. Rentes, 1893, 3½ per cent	18,335 00
Bremen, Germany, 3½ per cent	119.000 00
Cuba, loan of 1890, 5 per cent	28,950 00
Havana Treas., Cuba, 6 per cent	25,298 73
Hungarian gold, 4 per cent, 1887	100,250 00
Italian, 4¼ per cent, 4½ per cent, 5 per cent	1,115,420 34
Lucerne, Switzerland, 4 per cent	77,220 60
Russian State No. Agrarian Bank, 4 per cent	2,778,450 00
Russian Consolidated Int. Railway, 4½ per cent	40,700 90
Russian Nicholas Railway, 4 per cent	95,200 00
Rus. Mos. Jar & H. Railway, 4 per cent	215,394 00
Rus. Mos. Kazan Railway, 4 per cent	154,800 00
Rus. Riasan-Oural Railway, 4 per cent	346,052 00
Rus. Chi. East. Railway, 4 per cent	43,250 00
Russian State rentes, 4 per cent	327,800 00
Russian-Moscow-Riasan, 4 per cent	12,495 00
Russian Moscow, Windau & Rybinsk, 4 per cent	688,891 00
Russian Rybinsk Railway, 4 per cent	29,036 00
Russian Southeastern Railway, 4 per cent	46,291 00
Servia State loan, 4 per cent	7,816 00
Swiss loans of 1883, 3¾ per cent; 1889, 3½ per cent; 1897, 3 per cent	20,265 00
Swedish State, 3½ per cent	95,200 00
U. S. of Mex. Ext. Con. g., 5 per cent	485,000 00
U. S. of Mex. Int. Dbt. Con., 5 per cent	28,571 43
Urey, Switzerland, 4 per cent, 1904	159,225 00
Wurtemberg State, 3½ per cent	45,220 00
Total	$9,613,274 00

Most of these investments are explained by the fact that the American life insurance companies are doing business in other parts of the world, but no matter for what reason they have been acquired, the fact remains that they are large creditors of foreign governments and foreign railways. The United States is rapidly improving her position as a factor in the world's money markets.[1]

Chicago Building Trades' Dispute.[2]—February 6, 1901, witnessed the collapse of the Chicago building trades' organization which had for two years controlled the labor situation in the building trades. This result was due to the efforts of the contractors' organization, formed to resist the encroachments of the unions. The situation which led up to this conflict between the two organizations illustrates

[1] Figures taken from *United States Investor*.

[2] Condensed from *The Metal Worker*.

the possibilities for evil of militant trades-unionism, and has given the United States a concrete illustration of the handicap under which our English competitors have labored. The Building Trades' Council included in its organization practically the entire membership of the various labor organizations in the building trades. It began by making some moderate demands upon certain contractors and enforcing these by the method of sympathetic strikes. The uniform success of these early movements encouraged the leaders of the building trades' council to more radical action. The conservative element was forced to the rear and the organization was launched upon a career of the most obstreperous tyranny.

The first sign of the new spirit was a general lightening of the restrictions upon membership in the various unions. Many of the unions made the membership fee so large as to amount to practical prohibition and some even went so far as to specifically prohibit for a term of years any increase in their membership. The next step in the program of "making work" was to prohibit the use of machinery to cut-stone contractors. At one time machinery to the value of $110,000 was lying idle in their yards. The Building Trades' Council next went for the man who was doing too much work. The plumber was restricted to so many fixtures in a day, the gas-fitter to so many feet of pipe, the lather to so many bundles of lath and the bricklayer to so many bricks, in each case the maximum being far below an average man's capacity. In one case, during the construction of the Merchants' Loan Building, a boss plumber, working according to union rules, did in eight hours' continuous labor four days' work. In the enforcement of these restrictions the council employed very freely the weapon of the sympathetic strike, until contractors were entirely uncertain as to the time within which they would be able to finish a building once undertaken. The construction of the Montgomery Ward building was interrupted by twenty sympathetic strikes. Some of the causes of these strikes were as follows: Because a mason spread his mortar with a shovel instead of a trowel; because the soft-stone cutter did hard-stone cutters' work; because the carpenter did the iron man's work; because a carpenter sharpened his tools in his own time instead of the boss's; because a boiler was made in a non-union shop; because the boss hurried his men along; because an employer discharged an incompetent man; because an employer would not pay railroad fare out of town; because an employer was late on pay-day. The result of this "make-work" policy on the part of the unions was that in 1899 the total value of the buildings constructed in Chicago was $20,000,000, although the amount normally demanded was $50,000,000. The contractors were afraid to undertake a piece of work,

being in complete uncertainty as to the date of its completion. When the situation had become intolerable, the contractors formed an organization to resist. They imported large numbers of non-union men, and, in spite of the passivity of the police, gave them protection. The council held out for a year, during which time its membership declined from 40,000 to 4,000, but finally yielded on February 6, 1901, and permitted its men to work under the rules adopted by the contractors' organization, which were as follows:

1. There shall be no limitation to the amount of work a man can perform during his working day.
2. There shall be no limitations placed upon the use of machinery or tools.
3. There shall be no restriction of the use of any manufactured material.
4. No person shall have the right to interfere with any workman during working hours.
5. The use of apprentices shall not be prohibited.
6. The foreman shall be the agent of the employer.
7. All workmen shall be at liberty to work for whom they see fit.
8. All employers shall be at liberty to employ and discharge whom they see fit.

The necessity for rules such as these, most of which are plainly dictated by simple common sense, shows the extent of the evil from which the Chicago building trades have suffered and gives a new warning against the dangers of militant trades-unionism.